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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,397	09/20/2004	Hans Peter Rath	4396-8	9325

23117 7590 10/12/2006

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ARLINGTON, VA 22203

EXAMINER
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RABAGO, ROBERTO

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/508,397

Applicant(s)

RATH ET AL.

Examiner

Roberto Rábago

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/26/2006 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. Claims 3-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the process of claim 3 (and all claims dependent thereon), polyisobuteneamine R-X includes R which is polyisobutene of  $M_n$  of from 500-1500, said polyisobutene being made by the process recited in step (i), wherein step (i)b) states that the resultant PIB has  $M_n$  of from 500-1300. It is not understood how a PIB of maximum  $M_n$  of 1300 (as recited in the PIB synthesis) becomes a PIB of maximum  $M_n$  of 1500 (as recited in the formula for R-X).

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3. Although not a point of rejection under this title, the following is noted with respect to the working examples. The specification states in the paragraph bridging pages 14-15 that the polyisobutenes prepared according to the disclosed methods have specific properties, including at least 80% terminal olefin content. However, none of the working examples includes at least 80% terminal olefin content, and therefore these examples are not within the scope of the claims because the PIBs disclosed therein have terminal double bond content of only 65%. The specification provides a reasonably detailed description of methods used to make the required PIB, and in combination with the cited statement that use of such methods results in PIB with the claimed properties, the claims are deemed to meet the enablement requirement under 35 USC 112.

***Claim Rejections - 35 USC § 103***

4. Claims 1, 2 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kropp et al. (US 6,069,281) in view of Rath (US 5,286,823).

Kropp discloses processes of making amine-terminated polyolefins for use as additives for fuels and lubricants (abstract). In particular, the reference product is most preferably made using highly reactive polyisobutene with a high percentage of reactive double bonds and  $M_n$  of 750-2250 (col. 7, lines 44-59). Examples 1-4 and 6-16 describe the reaction and the amine-terminated products obtained, but do not appear to have used a polyisobutene within the claimed scope. Rath discloses highly reactive PIB with a high percentage of reactive double bonds and  $M_n$  of 500-5000 for use as

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intermediates in the preparation of additives for lubricants and fuels (col. 1, lines 1-63).

Clearly, the PIBs recommended for use in Kropp are substantially the same as those disclosed in Rath, and at least Example 4 of Rath discloses PIB within the claimed scope. Therefore, one of ordinary skill in the art would be motivated to use the PIB materials of Rath, including that shown in Example 4, in the process of Kropp because Kropp recommends the type disclosed in Rath, and both references recommend such PIB for use as precursors in the making of fuel and lubricant additives.

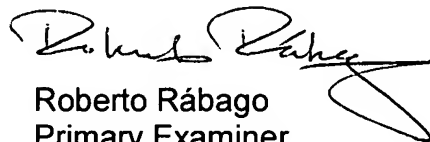
The PIBs of Rath (particularly that of Example 4) appear to be essentially identical to those described as product-by-process in the instant claims, and there is nothing on this record which would indicate that applicants' method of making the PIB would result in a distinct product. Accordingly, the burden of proof is shifted to applicants to show that the method of making the PIB as set forth as product-by-process would necessarily exclude the PIBs of Rath.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Rábago  
Primary Examiner  
Art Unit 1713

RR  
September 28, 2006